

0420-0500

# 3



OIPE

## RAW SEQUENCE LISTING

DATE: 02/07/2002

PATENT APPLICATION: US/09/888,243

TIME: 13:33:08

Input Set : A:\01997.211003.SEQLIST.TXT

Output Set: N:\CRF3\02072002\I888243.raw

P.S

4 <110> APPLICANT: Horvitz, H. Robert  
 5 Yuan, Junying  
 6 Shaham, Shai  
 8 <120> TITLE OF INVENTION: Relatedness of Human Interleukin-1beta  
 9 Convertase Gene to a C. Elegans Cell Death Gene, Inhibitory  
 10 Portions of these Genes and Uses Therefor  
 13 <130> FILE REFERENCE: 01997/211003  
 15 <140> CURRENT APPLICATION NUMBER: US 09/888,243  
 16 <141> CURRENT FILING DATE: 2001-06-22  
 18 <150> PRIOR APPLICATION NUMBER: US 09/083,662  
 19 <151> PRIOR FILING DATE: 1998-05-22  
 21 <150> PRIOR APPLICATION NUMBER: US 08/394,189  
 22 <151> PRIOR FILING DATE: 1995-02-24  
 24 <150> PRIOR APPLICATION NUMBER: US 08/282,211  
 25 <151> PRIOR FILING DATE: 1994-07-11  
 27 <150> PRIOR APPLICATION NUMBER: US 07/984,182  
 28 <151> PRIOR FILING DATE: 1992-11-20  
 30 <150> PRIOR APPLICATION NUMBER: US 07/897,788  
 31 <151> PRIOR FILING DATE: 1992-06-12  
 33 <160> NUMBER OF SEQ ID NOS: 30  
 35 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
 37 <210> SEQ ID NO: 1  
 38 <211> LENGTH: 7653  
 39 <212> TYPE: DNA  
 40 <213> ORGANISM: Caenorhabditis elegans  
 42 <400> SEQUENCE: 1  
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 44 ttttagcacia ttaatcttgt ttcagaaaaa aagtcagtt ttctagattt ttccgtctta 120  
 45 ttgtcgaatt aatatcccta ttatcacttt ttcagtgtca tctcagagcg gcacgtcctc 180  
 46 aaagaattgt gagagcaaac gcgctcccat tgacctccac actcagccgc caaaacaaac 240  
 47 gttcgaacat tcgtgtgttg tgctcctttt ccgttatctt gcagtcattt tttgtcgttt 300  
 48 ttttctttgt tctttttgtt gaacgtgttg ctaagcaatt attacatcaa ttgaagaaaa 360  
 49 ggctcgccga tttattgttg ccagaaagat tctgagattc tcgaagtcga ttttataata 420  
 50 ttttaaccttg gtttttgcatt tgtttcgttt aaaaaaacca ctgtttatgt gaaaaacgat 480  
 51 tagtttacta ataaaactac ttttaaacct ttacctttac ctcaccgctc cgtgttcattg 540  
 52 gctcatagat tttcgatact caaatccaaa aataaattta cgagggcaat taatgtgaaa 600  
 53 caaaaacaat cctaagattt ccacatgttt gacctctccg gcaccttctt ccttagcccc 660  
 54 accactccat cacctctttg gcggtgttct tcgaaaccca ctaggaaag cagtgtgtat 720  
 55 ctcatttggt atgctctttt cgattttata gctctttgtc gcaatttcaa tgctttaaac 780  
 56 aatccaaatc gcattatatt tgtgcatgga ggcaaatgac ggggttgaa tcttagatga 840  
 57 gatcaggagc tttcagggtg aacgcccggg tcattttgta ccacatttca tcattttcct 900  
 58 gtcgtccttg gtatcctcaa cttgtcccgg ttttgttttc ggtacactct tccgtgatgc 960  
 59 cacctgtctc cgtctcaatt atcgttttaga aatgtgaact gtccagatgg gtgactcata 1020

ENTERED

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60 ttgctgctgc tacaatccac tttcttttct catcggcagt cttacgagcc catcataaac 1080
61 ttttttttcc gcgaaatttg caataaacgg gccaaaaact ttctccaaat tgttacgcaa 1140
62 tatatacaat ccataagaat atcttctcaa tgtttatgat ttcttcgcag cactttctct 1200
63 tcgtgtgcta acatcttatt tttataatat ttccgctaaa attccgattt ttgagtatta 1260
64 atttatcgta aaattatcat aatagcaccg aaaactacta aaaatggtaa aagctccttt 1320
65 taaatcggct cgacattatc gtattaaagga atcacaaaat tctgagaatg cgtactgcgc 1380
66 aacatatttg acggcaaaat atctcgtagc gaaaactaca gtaattcttt aaatgactac 1440
67 tgtagcgctt gtgtcgattt acgggctcaa tttttgaaaa taattttttt tttcgaattt 1500
68 tgataacccg taaatcgtca caacgctaca gtagtcattt aaaggattac tgtagtctta 1560
69 gctacgagat attttgcgcg ccaaattatga ctgtaatacg cattctctga attttgtgtt 1620
70 tccgtaataa tttcacaga ttttggcatt ccaactttaa ggcgacagc atttattcca 1680
71 atgggtctcg gcacgcaaaa agtttgatag acttttaaat tctccttgca tttttaattc 1740
72 aattactaaa attttctgta attttctgt taaaattttt aaaatcagtt ttctaataatt 1800
73 ttccaggctg acaaacagaa acaaaaacac acaaacatt ttaaaaatca gttttcaaatt 1860
74 taaaaataac gatttctcat tgaaaattgt gttttatgtt tgcgaaaata aaagagaact 1920
75 gattcaaac aattttaaca aaaaaaaccc ccaaaattcg ccagaaatca agataaaaaa 1980
76 ttcaagaggg tcaaaatttt ccgattttac tgactttcac cttttttttc gtagttcagt 2040
77 gcagttgttg gagtttttga cgaaaactag gaaaaaaatc gataaaaatt actcaaatcg 2100
78 agctgaattt tgaggacaat gtttaaaaaa aaacactatt tttccaataa tttcactcat 2160
79 tttcagacta aatcgaaaat caaatcgtac tctgactacg ggtcagtaga gaggtcaacc 2220
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81 tctctagtca tctaaaagtc gatgaaatty tcgaagttct catcgcaaaa caagtgttga 2340
82 atagtataa tggagatatg attaatgtga gtttttaatc gaataataat tttaaaaaaa 2400
83 aattgataat ataaagaata tttttgcagt catgtggaac ggttcgcgag aagagacggg 2460
84 agatcgtgaa agcagtgcaa cgacggrgag atgtggcggt cgacgcgttt tatgatgctc 2520
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97 aaacgaatat atgctcgaat tgtgacaacg aattttaatt tgtcattttt gtgttttctt 3300
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99 cttttaaaaga gttacagtag ttttcgcttc aagatatattt gaaaagaatt ttaaacattt 3420
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107 atgtaaaaaa tgcagtcggt tttttacact tttctgcaca aatgaatagg gggaaaatgt 3900
108 attaaaaatac attttttgta tttttcaaca tccatgattt aaccccatla tttttctggt 3960

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109 gagcaactta aaaagtagag aatattagag cgaaaaccaa aatttcttca agatattacc 4020
110 tttattgata attatagatg ttaataagca tatcttgaat gaaagtcagc aaaaatatgt 4080
111 gcgaaacacc tgaaaaaaat caaaaattct gcgaaaattg aaaaaatgca ttaaaatata 4140
112 tttttgcatt tttctacatc acatgaatgt agaaaattaa aagggaatc aaaaatttcta 4200
113 gaggatataa ttgaatgaaa cattgcgaaa ttaaaatgtg cgaaacgtca aaaaagagga 4260
114 aatttgggta tcaaaatcga tcctaaaacc aacacatttc agcatccgcc aactcttcat 4320
115 tcaccggatg ctcttctctc ggatacagtt caagtcgtaa tcgctcattc agcaaagctt 4380
116 ctggaccaac tcaatacata ttccatgaag aggatatgaa ctttgtcgat gcaccaacca 4440
117 taagccgtgt tttcgacgag aaaaccatgt acagaaactt ctcgagtcct cgtggaatgt 4500
118 gcctcatcat aaataatgaa cactttgagc agatgccaac acggaatggt accaaggccg 4560
119 acaaggacaa tcttaccaat ttgttcagat gcatgggcta tacggttatt tgcaaggaca 4620
120 atctgacggg aagggtacgg cgaaattata ttacccaaac gcgaaatttg ccattttgcg 4680
121 ccgaaaatgt ggcgcgccgt ctgcacacga caatttgtgt taaatgcaaa aatgtataat 4740
122 tttgcaaaaa acaaaatttt gaacttccgc gaaaatgatt tacctagttt cgaaattttc 4800
123 gttttttccg gctacattat gtgttttttc ttagtttttc tataatattt gatgtaaaaa 4860
124 accgtttgta aattttcaga caattttccg catacaaaac ttgatagcac gaaatcaatt 4920
125 ttctgaattt tcaaaattat ccaaaaatgc acaatttaaa atttgtgaaa attggcaaac 4980
126 ggtgtttcaa tatgaaatgt atttttaaaa actttaaaaa ccactccgga aaagcaataa 5040
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128 caaaatttga aaaaatcatg aaggatttag aaaagtttta taacattttt tctagatttt 5160
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131 accaaaaatt tgtcgtgtcg agaccaggtt ccgtagtttt tgtcgcaaaa attgcaccat 5340
132 tggacaataa accttcctaa tcaccaaaaa gtaaaattga aatcttcgaa aagccaaaaa 5400
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134 aaatcaattt tctgcaaaat accaaaaaga aacccgaaaa aatttccag ccttgttctt 5520
135 aatgtaaaat gatatttaat ttccagggaa tgctcctgac aattcgagac tttgccaaac 5580
136 acgaatcaca cggagattct gcgatactcg tgattctatc acacggagaa gagaatgtga 5640
137 ttattggagt tgatgatata ccgattagta cacacgagat atatgatctt ctcaacgcgg 5700
138 caaatgctcc ccgtctggcg aataagccga aaatcgtttt tgtgcaggct tgtcgargcg 5760
139 gttcgttttt tattttaatt ttaataaaa tattttaaat aaattcattt tcagaacgtc 5820
140 gtgacaatgg attcccagtc ttggattctg tcgacggagt tcttgcattt cttcgtcgtg 5880
141 gatgggacaa tcgagacggg ccattgttca attttcttg atgtgtgcgg ccgcaagtty 5940
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143 attccagaaa gtcccgatcg aaaaattgcy atataattac gaaatttgtg ataaaatgac 6060
144 aaaccaatca gcacgtcga tctccgccca ctcatcgga ttggtttgaa agtgggcgga 6120
145 gtgaattgct gattggtcgc agttttcagt ttagagggaa tttaaaaatc gccttttctga 6180
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154 gaatatttta tgctaatttt tttgcgttaa attttgaaat agtcactatt tatcgggttt 6720
155 ccagtaaaaa atgtttatta gccattggat tttactgaaa acgaaaattt gtagtttttc 6780
156 aacgaaaatt atcgattttt aaatgtaaaa aaaaatagcg aaaattacat caaccatcaa 6840
157 gcatttaagc caaaattggt aactcattta aaaattaatt caaagttgtc cacgagtatt 6900

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## RAW SEQUENCE LISTING

DATE: 02/07/2002

PATENT APPLICATION: US/09/888,243

TIME: 13:33:09

Input Set : A:\01997.211003.SEQLIST.TXT

Output Set: N:\CRF3\02072002\I888243.raw

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158 acacgggttg cgcgcgccgca gtttgcaaaa cgacgctccg cctctttttc tgtgcgggctt 6960
159 gaaaacaagg gatcgggttta gattttttccc caaaatttaa attaaatttc agatgacaty 7020
160 ccgcctgctc aaaaagttct acttttgccc ggaagcacga aactctgccg tctaaaattc 7080
161 actcgtgatt cattgcccaa ttgataattg tctgtatctt ctccccagc tctcttttcg 7140
162 ccaattagtt taaaaccatg tgtatattgt tctctatac tcatttcaat ttatcattct 7200
163 atcattttct tccccatttt cacacatttc catttctcta cgataatcta aaattatgac 7260
164 gtttggtgtc cgaacgcata ataattttta taactcgttt tgaatttgat tagttgttgt 7320
165 gccaggtata tatgtatgta ctatgcttct atcaacaaaa tagtttcata gatcatcacc 7380
166 ccaacccccc caacctaccg taccatattc atttttgccc ggaatcaatt tcgattaatt 7440
167 ttaacctatt ttttcgccac aaaaaatcta atatttgaat taacgaatag cattcccatc 7500
168 tctcccggtg cggaatgcct cccggccttt taaagttcgg aacatttggc aattatgtat 7560
169 aaatttgtag gtccccccca tcatttcccg cccatcatct caaattgcat tcttttttcg 7620
170 ccgtgatata ccgattctgg tcagcaaaga tct 7653

```

172 &lt;210&gt; SEQ ID NO: 2

173 &lt;211&gt; LENGTH: 503

174 &lt;212&gt; TYPE: PRT

175 &lt;213&gt; ORGANISM: Caenorhabditis elegans

177 &lt;220&gt; FEATURE:

178 &lt;221&gt; NAME/KEY: VARIANT

179 &lt;222&gt; LOCATION: 27, 65, 360, 403, 412, 428, 449, 466, 483, 486

180 &lt;223&gt; OTHER INFORMATION: Xaa = Any Amino Acid

182 &lt;400&gt; SEQUENCE: 2

```

183 Met Met Arg Gln Asp Arg Arg Ser Leu Leu Glu Arg Asn Ile Met Met
184 1 5 10 15
W--> 185 Phe Ser Ser His Leu Lys Val Asp Glu Ile Xaa Glu Val Leu Ile Ala
186 20 25 30
187 Lys Gln Val Leu Asn Ser Asp Asn Gly Asp Met Ile Asn Ser Cys Gly
188 35 40 45
189 Thr Val Arg Glu Lys Arg Arg Glu Ile Val Lys Ala Val Gln Arg Arg
190 50 55 60
W--> 191 Xaa Asp Val Ala Phe Asp Ala Phe Tyr Asp Ala Leu Arg Ser Thr Gly
192 65 70 75 80
193 His Glu Gly Leu Ala Glu Val Leu Glu Pro Leu Ala Arg Ser Val Asp
194 85 90 95
195 Ser Asn Ala Val Glu Phe Glu Cys Pro Met Ser Pro Ala Ser His Arg
196 100 105 110
197 Arg Ser Arg Ala Leu Ser Pro Ala Gly Tyr Thr Ser Pro Thr Arg Val
198 115 120 125
199 His Arg Asp Ser Val Ser Ser Val Ser Ser Phe Thr Ser Tyr Gln Asp
200 130 135 140
201 Ile Tyr Ser Arg Ala Arg Ser Arg Ser Arg Ala Leu His Ser
202 145 150 155 160
203 Ser Asp Arg His Asn Tyr Ser Ser Pro Pro Val Asn Ala Phe Pro Ser
204 165 170 175
205 Gln Pro Ser Ser Ala Asn Ser Ser Phe Thr Gly Cys Ser Ser Leu Gly
206 180 185 190
207 Tyr Ser Ser Ser Arg Asn Arg Ser Phe Ser Lys Ala Ser Gly Pro Thr
208 195 200 205
209 Gln Tyr Ile Phe His Glu Glu Asp Met Asn Phe Val Asp Ala Pro Thr

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Output Set: N:\CRF3\02072002\I888243.raw

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210      210      215      220
211 Ile Ser Arg Val Phe Asp Glu Lys Thr Met Tyr Arg Asn Phe Ser Ser
212 225      230      235      240
213 Pro Arg Gly Met Cys Leu Ile Ile Asn Asn Glu His Phe Glu Gln Met
214      245      250      255
215 Pro Thr Arg Asn Gly Thr Lys Ala Asp Lys Asp Asn Leu Thr Asn Leu
216      260      265      270
217 Phe Arg Cys Met Gly Tyr Thr Val Ile Cys Lys Asp Asn Leu Thr Gly
218      275      280      285
219 Arg Gly Met Leu Leu Thr Ile Arg Asp Phe Ala Lys His Glu Ser His
220      290      295      300
221 Gly Asp Ser Ala Ile Leu Val Ile Leu Ser His Gly Glu Glu Asn Val
222 305      310      315      320
223 Ile Ile Gly Val Asp Asp Ile Pro Ile Ser Thr His Glu Ile Tyr Asp
224      325      330      335
225 Leu Leu Asn Ala Ala Asn Ala Pro Arg Leu Ala Asn Lys Pro Lys Ile
226      340      345      350
W--> 227 Val Phe Val Gln Ala Cys Arg Xaa Glu Arg Arg Asp Asn Gly Phe Pro
228      355      360      365
229 Val Leu Asp Ser Val Asp Gly Val Pro Ala Phe Leu Arg Arg Gly Trp
230      370      375      380
231 Asp Asn Arg Asp Gly Pro Leu Phe Asn Phe Leu Gly Cys Val Arg Pro
232 385      390      395      400
W--> 233 Gln Val Xaa Gln Val Trp Arg Lys Lys Pro Ser Xaa Ala Asp Ile Leu
234      405      410      415
W--> 235 Ile Arg Tyr Ala Thr Thr Ala Gln Tyr Val Ser Xaa Arg Asn Ser Ala
236      420      425      430
237 Arg Gly Ser Trp Phe Ile Gln Ala Val Cys Glu Val Phe Ser Thr His
238      435      440      445
W--> 239 Xaa Lys Asp Met Asp Val Val Glu Leu Leu Thr Glu Val Asn Lys Lys
240      450      455      460
W--> 241 Val Xaa Cys Gly Phe Gln Thr Ser Gln Gly Ser Asn Ile Leu Lys Gln
242 465      470      475      480
W--> 243 Met Pro Xaa Met Thr Xaa Arg Leu Leu Lys Lys Phe Tyr Phe Trp Pro
244      485      490      495
245 Glu Ala Arg Asn Ser Ala Val
246      500
249 <210> SEQ ID NO: 3
250 <211> LENGTH: 1373
251 <212> TYPE: DNA
252 <213> ORGANISM: Homo sapiens
254 <220> FEATURE:
255 <221> NAME/KEY: CDS
256 <222> LOCATION: (18)...(1229)
258 <400> SEQUENCE: 3
259 aaaaggagag aaaagcc atg gcc gac aag gtc ctg aag gag aag aga aag 50
260      Met Ala Asp Lys Val Leu Lys Glu Lys Arg Lys
261      1      5      10
263 ctg ttt atc cgt tcc atg ggt gaa ggt aca ata aat ggc tta ctg gat 98

```

Use of n and/or Xaa has been detected in the Sequence Listing.  
 Review the Sequence Listing to insure a corresponding  
 explanation is presented in the <220> to <223> fields of  
 each sequence using n or Xaa.

## VERIFICATION SUMMARY

DATE: 02/07/2002

PATENT APPLICATION: US/09/888,243

TIME: 13:33:10

Input Set : A:\01997.211003.SEQLIST.TXT

Output Set: N:\CRF3\02072002\I888243.raw

L:185 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:191 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:227 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:233 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:235 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:239 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:241 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:243 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:380 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4  
L:386 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4  
L:412 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4  
L:418 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4  
L:420 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4  
L:422 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4  
L:426 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4  
L:453 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:457 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:465 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:481 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:532 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:556 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:558 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:673 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13  
L:756 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15  
L:774 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16  
L:806 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18  
L:824 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19  
L:865 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20  
L:869 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20  
L:871 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20  
L:873 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20  
L:875 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20  
L:877 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20  
L:879 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20  
L:881 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20  
L:900 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21  
L:902 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21  
L:904 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21  
L:906 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21  
L:908 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21  
L:910 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21  
L:912 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21  
L:955 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22  
L:990 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23  
L:992 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23  
L:996 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23  
L:998 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23  
L:1000 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/09/888,243

DATE: 02/07/2002

TIME: 13:33:10

Input Set : A:\01997.211003.SEQLIST.TXT

Output Set: N:\CRF3\02072002\I888243.raw

L:1004 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23

L:1023 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24